

REMARKS

Reconsideration and allowance of this application are respectfully requested in view of the above amendment and the discussion below.

Applicants invention concerns a data bus arrangement and method for connecting a plurality of nodes to one another by using a logical decision gate 1 receiving a corresponding plurality of first electrical signals routed from the plurality of nodes. An output of the logical decision gate provides a routed output to each of the nodes. Opto-electrical transducers (S/E) are connected between the nodes and the logic decision gate 1. A signal conditioning circuit SA is arranged between the logical decision gate 1 and the inputs of the nodes in order to provide a pulse shaping function for the output signal of the logical decision gate.

Claims 3-6 have been rejected under 35 U.S.C. 103 as unpatentable over Takahashi U.S. Patent No. 4,644,587 in view of Nobuhara U.S. Patent No. 5,955,921 and Islam U.S. Patent No. 5,101,456, as indicated at page 3 of the Patent Office Action.

According to the statement of the rejection the Takahashi reference has a plurality of nodes 432 and 442 with a logical decision gate 514 and a plurality of inputs 570-n for receiving a plurality of first electrical signals from the plurality of nodes wherein the output of the logical decision gate is connected in parallel to provide second electrical outputs signals (580-n) routed to each of said plurality of nodes. The opto-electric transducer 502 is connected, according to the rejection, between one of the nodes 570-1 and one of the inputs of the logic

decision gate 514 and the output of the logic decision gate is fed to an electrical input of the transducer 518.

The reference to Takahashi has been acknowledged by the Examiner as not disclosing a signal conditioning circuit arranged between the logical decision gate and the inputs of the nodes. The secondary reference to Nobuhara has been cited for teaching that a pulse signal is distorted in an optical coupler receiver and the reference to Islam has been cited for teaching pre-distortion to change the shape of the pulse.

The conclusion of the Examiner that it would have been obvious to provide a signal conditioning circuit between the logical decision gate and the inputs of the nodes 580.

Applicants respectfully traverse this rejection on the grounds that Takahashi does not have the output of the logical decision gate routed to each of said plurality of nodes. Takahashi, using the Examiner's analysis has nodes 432 and 442 shown in Figure 4. The output of the logical decision gate 514 in Figure 5 goes to only one node which is shown as the node 580 in Figure 5. In other words, looking at Figure 4 for the routed on the input side of the nodes 432 and the output of the nodes 442, there is no connection between the nodes which is required if the output of decision gate 514 in Figure 5 is to be able to be routed to each of the nodes. Therefore there is no analogy between the subject matter of the output of the decision gate claimed in independent claims 3 and 5 and the reference to Takahashi. Additionally, claims 3 and 5 require a plurality of

transducers each connected between one of the nodes and one of the inputs of the logic decision gate wherein the output of the logic decision is fed to an electrical input of each of said opto-electric transducers. Claim 3 has been amended to more clearly recite this feature while claim 5 already contains this limitation. Even accepting the statement of the Examiner for the showing of the references to Nobuhara and Islam, they add nothing toward meeting the claim limitations discussed above, which are absent from the primary reference to Takahashi. Additionally, the fact that it is known that a pulse signal is distorted in an optical coupling receiver does not provide any indication as to how a signal conditioning element would be provided in Takahashi especially in light of the differences in connection between the logical decision gate outputs as claimed in independent claims 3 and 5 when contrasted with the reference to Takashi, as discussed above.

In response to the objection to the Abstract, Applicants have amended the abstract as attached herewith.

With response to the Drawings, Applicants are attaching a proposed drawing correction for Figures 1 and 2 which will be accomplished upon approval of the Examiner.

Therefore in view of the distinguishing features between the claimed invention and the references which features are not shown or disclosed or made obvious by the references or their combinations Applicants respectfully request that this application containing claims 3-6 be allowed and be passed to issue.

Serial No. 09/623,897
Attorney Docket No.:080437.49164US
Amendment Dated: March 3, 2004
Reply to Office Action: November 3, 2003

If there are any questions regarding this amendment or the application in general, a telephone call to the undersigned would be appreciated since this should expedite the prosecution of the application for all concerned.

If necessary to effect a timely response, this paper should be considered as a petition for an Extension of Time sufficient to effect a timely response, and please charge any deficiency in fees or credit any overpayments to Deposit Account No. 05-1323 (Docket #080437.49164US).

Respectfully submitted,

March 3, 2004

Vincent J. Vendulak Jr., P.C.
By Jeffrey D. Sanok 29,000
Registration No. 32,169

CROWELL & MORING LLP
Intellectual Property Group
P.O. Box 14300
Washington, DC 20044-4300
Telephone No.: (202) 624-2500
Facsimile No.: (202) 628-8844

JDS:adb
Document#307025

RECEIVED

MAR 09 2004

Attorney Docket No.: 080437.49164US
PATENT

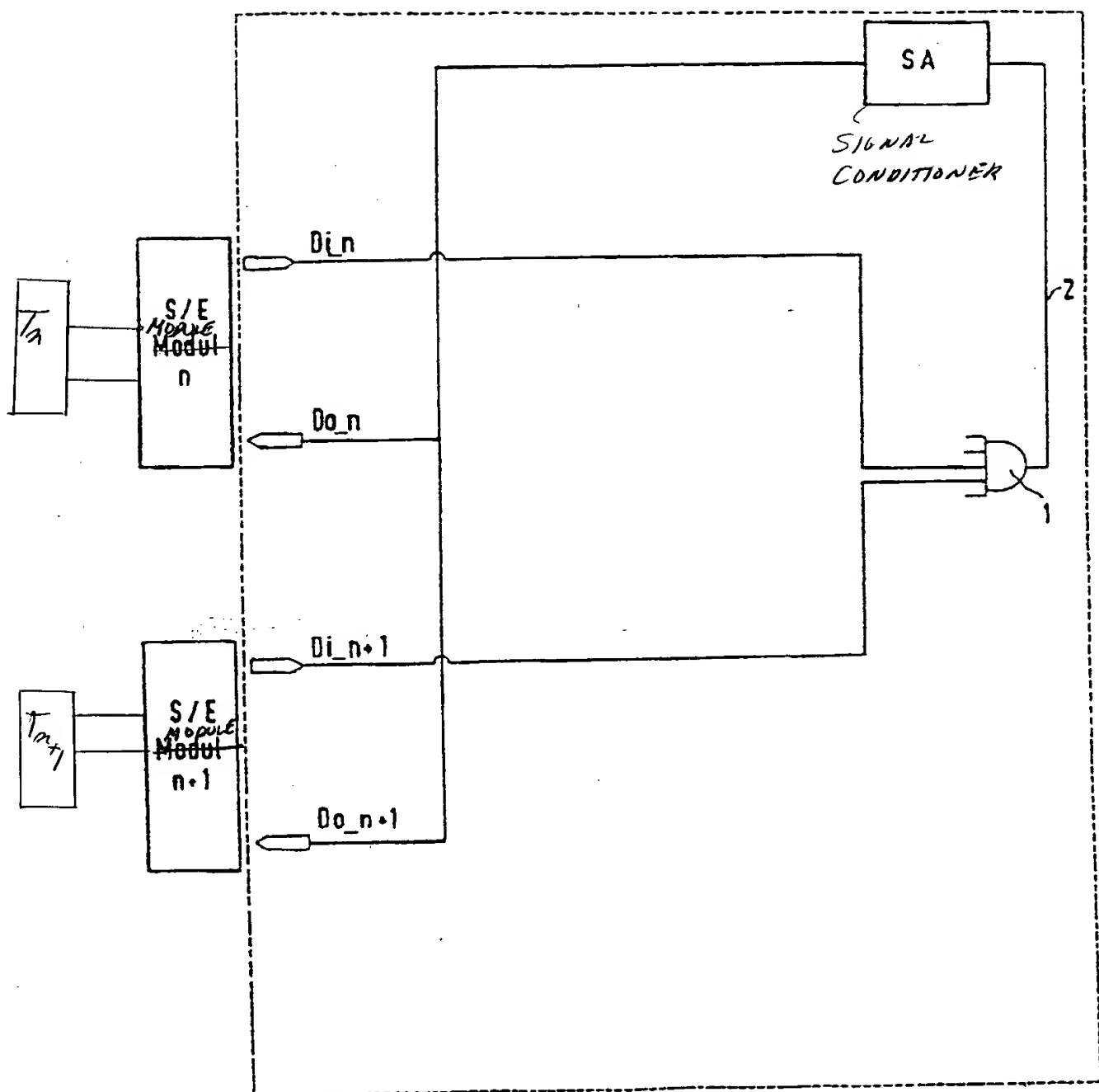


ABSTRACT OF THE DISCLOSURE

A data bus arrangement and method for connecting a plurality of nodes to one another through a star coupler arrangement of a data bus which uses a logical decision gate having a plurality of inputs corresponding to said plurality of nodes wherein the logical decision gate inputs receive electrical signals and outputs an electrical signal to be routed back to each of said plurality of nodes. Some of the nodes are connected through opto-electric transducers to the inputs of the logical decision gate. These transducers convert optical input signals from the nodes to electric signals to the inputs of the logical decision gate and also convert the output from the logical decision gate back to optical signals to the nodes. A signal conditioning circuit modifies the output signal of the logical decision gate. ~~in a pulse shaping manner in order to compensate for distortion caused by optical-to-electrical and electric-to-optical conversions occurring within the opto-electronic transducers~~

COPY

FIG.1





2/2

FIG.2

